

title.

 $\frac{1}{6} \frac{1}{2} 2-2$

date.

 $\sqrt{6} x$

$$\#1-(a) \quad y = x \sqrt[3]{x}$$

$$\hookrightarrow y = x^{\frac{4}{3}}$$

$$\hookrightarrow \frac{dy}{dx} = \frac{4}{3} x^{\frac{1}{3}} = \frac{4}{3} \sqrt[3]{x}$$

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$$\#1-(c) \quad y = \frac{1+x^2}{1-x^2}$$

$$\hookrightarrow \frac{dy}{dx} = \frac{(1+x^2)'(1-x^2) - (1+x^2)(1-x^2)'}{(1-x^2)^2}$$

$$= \frac{2x(1-x^2) - (-2x)(1+x^2)}{(1-x^2)^2}$$

$$= \frac{4x}{(1-x^2)^2}$$

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$$\#1-(e) \quad y = (2-3x)^7$$

$$\frac{dy}{dx} = \frac{d}{du}(u^7) \times \frac{du}{dx} \quad (u = 2-3x)$$

$$= 7u^6 \times (-3)$$

$$= -21(2-3x)^6$$

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